

**KISH P & I LOSS PREVENTION CIRCULAR KPI-LP-04-2012**

**Electric Kettle Fire**

In a reported case after a mid-afternoon coffee break, the crew had left the mess-room and failed to notice that the water in the kettle was still boiling and the automatic thermostat switch had not operated and cut off the power supply to the heating coil.

Some minutes later, all the water had evaporated and without any more heat load, the temperature rose high enough for the plastic base and kettle bottom to melt and ultimately catch fire. The strong smell of burning plastic drew the attention of a passing crewmember, who, after seeing the fire and smoke at the base of the electric kettle, quickly disconnected the power cord from the supply socket and transferred the burning kettle and base unit into the adjacent galley sink and turned on the water, successfully extinguishing the fire.



▲ View of fire-damaged kettle and base unit

The electric kettles being used on board typically consisted of a cordless stainless steel jug fitted with a plastic base that contained the electric heating element. Power is supplied via a male-female central connector mounted on the base unit, also made of plastic.

**Root cause/contributory factors:**

1. Automatic thermostatic switch malfunction;
2. Negligence on the part of the crew in not observing that the kettle was still boiling when they left the mess-room at the end of the coffee break.



### **Lessons to be learnt:**

- 1- The electric kettles supplied on board should be of approved standard & quality. They should be able to work on board with various tilting conditions and humidity ranges. There are very low quality kettles that the water is boiled through two plates with direct electrical connections immersed under water in the jug, which makes the equipment extremely dangerous. The electric kettles aboard many ships are not of the standard quality, hence extra care should be observed while using them;
- 2- The existing kettles on board should be checked for any sign of broken or damaged wires; connections and deformed plastic parts which may be a sign for extra heat. The heating elements might be covered with salt residues and ultimately help corroding the outer cover and water getting in direct connection with electricity causing short circuits, etc;
- 3- There should be prominent notices displayed near all electrical appliances requiring the disconnection of power cord from electrical supply outlet when not in use;
- 4- The use of automatic electric kettles involves following the maker's instructions. They should never be filled more than their capacity. The electric parts must not be immersed in water or so washed/touched by wet hand. The user should bear in mind that the automatic cut-off may not function due to variety of reasons, so a double check by senior officers or ratings and the attending mess-persons should be made;
- 5- The readiness of Fire Safety Systems on board is of utmost importance with respect to this & other similar cases. Having proper fire monitoring system components like smoke or heat detectors and employing fire patrol rounds as a part of every watch routine are deterrent criteria;
- 6- Using electric kettles in the cabins and non-public areas where proper monitoring is absent should be avoided as far as possible.

KISH P&I CLUB